

Listing of Claims:

Claim 1. (currently amended) Drive unit of a vehicle with a vehicle cooling circuit, consisting of

1.1 a hydrodynamic retarder~~(100)~~ with a rotor vane wheel~~(11)~~ and a stator vane wheel~~(12)~~, in which

1.2 the hydrodynamic retarder~~(100)~~ is located in the vehicle cooling circuit~~(120)~~ and the working medium of the retarder corresponds to the vehicle cooling medium characterized by the fact that

1.3 means [agents] are connected to the cooling circuit~~(120)~~ for the purpose of removing a pre-determined quantity of working medium from the cooling circuit~~(120)~~ during the changeover from braking mode to non-braking mode, and for the purpose of supplying a pre-determined quantity of working medium into the cooling circuit~~(120)~~ during the changeover from non-braking mode to braking mode.

Claim 2. (currently amended) Drive unit according to claim 1, characterized by the fact that, as a means for adjusting pressure variations, a connected damper cylinder~~(30)~~ is attached to the cooling circuit~~(120)~~ in such a way that, during the changeover from braking mode to non-braking mode, a pre-determined quantity of working medium is removed from the cooling circuit~~(120)~~ and, during the changeover from non-braking mode to braking mode, a pre-determined working medium is supplied into the cooling circuit, whereby the changeover takes place controlled and automatically.

Claim 3. (currently amended) Drive unit according to claim 2, characterized by the fact that the damper cylinder~~(30)~~ comprises a piston~~(30.1)~~ which is on one side connected pressure-conducting to the cooling circuit~~(120)~~ in front of the workspace~~(140)~~ of the retarder~~(100)~~ and which additionally is pressure-loaded by means of a compression spring~~(30.2)~~ in the damper cylinder~~(30)~~ and which, on the other side, is connected to the cooling circuit~~(120)~~ behind the workspace~~(140)~~ of the retarder~~(100)~~ via a line~~(42)~~.

Claim 4. (currently amended) Drive unit according to ~~one of the claims 1 through 3~~claim 1, characterized by the fact that a pressure relief line (~~64, 65~~) is connected to a pressure shutoff valve (~~62~~) at the cooling circuit (~~120~~) and/or the retarder (~~100~~), whereby the pressure shutoff valve (~~62~~) is positioned in the pressure relief line (~~64, 65~~) in such a controlled way that it is opened during the changeover of the retarder from braking mode to non-braking mode.

Claim 5. (currently amended) Drive unit according to ~~one of the claims 1 through 4~~claim 1, characterized by the fact that, during braking mode, the pressure relief line (~~64, 65~~) is connected to the front of the retarder (~~100~~) with one end at a place of low pressure in flow direction and with the other end at a place of high pressure to the retarder (~~100~~) or behind the retarder (~~100~~), whereby the pressure at the place of low pressure, in particular, amounts to a maximum of 2 bar and the pressure at the place of high pressure amounts, in particular, to between 11 and 30 bar.

Claim 6. (currently amended) Drive unit according to ~~one of the claims 1 through 5~~claim 1, characterized by the fact that the drive unit has a motor (~~1~~) and a gearbox, and that the retarder (~~100~~) is a secondary retarder which is located in force flow direction behind the gearbox.

Claim 7. (currently amended) Retarder unit, comprising

- ~~7.1~~ a hydrodynamic retarder (~~100~~) with a rotor (~~11~~) and a stator (~~12~~), whereby
- ~~7.2~~ the hydrodynamic retarder (~~100~~) has a vehicle cooling medium as working medium, and
- ~~7.3~~ the retarder unit has a connection (~~71~~) for the purpose of supplying cooling medium and a connection (~~72~~) for the purpose of removing cooling medium,

characterized by the fact that

- ~~7.4~~ the retarder unit has means for the purpose of removing a pre-determined quantity of working medium during the changeover from braking mode to non-braking mode, and for the purpose of supplying a pre-determined quantity of working medium during the changeover from non-braking mode to braking mode.

Claim 8. (currently amended) Retarder unit according to claim 7, characterized by the fact that the means for the purpose of removing and supplying a pre-determined quantity of working medium comprise a damper cylinder-(30) which has a piston-(30.1) which on one side is connected current-conducting to the cooling circuit in flow direction behind the retarder-(100) via a line-(42) at a place of high pressure in the retarder unit. On its opposite side, it is connected pressure-conducting in front of the retarder-(100) via a line-(41) at a place of low pressure in the retarder unit.

Claim 9. (currently amended) Retarder unit according to ~~one of claims 7 or 8~~claim 7, characterized by the fact that the retarder unit also has a shutoff valve-(62) in a pressure relief line-(64, 65), whereby the pressure relief line-(64, 65) is on one end connected at a place of high pressure of the cooling circuit in flow direction behind the retarder or at the retarder-(100). At its other end, the pressure relief line-(64, 65) is connected at a place of low pressure of the cooling circuit in flow direction in front of the retarder-(100).

Claim 10. (currently amended) Retarder unit according to ~~one of the of claims 7 through 9~~claim 7, characterized by the fact that the line-(42), at the end opposite of the damping cylinder (30), is connected to a control valve-(17), and that the retarder unit also has a reversing valve (13) in flow direction behind the connection-(71) for the purpose of supplying cooling medium and in front of the retarder-(100) which is developed in such a way that in pre-determined switching positions cooling medium is directed around the retarder by means of the retarder (100)-or by means of a bypass-(66), and that in that way the control valve-(17), the pressure shutoff valve-(62), and the reversing valve-(13) will be pressure-load connected or controlled, whereby the retarder unit has been equipped with attached pressure-control connections.

Claim 11. (currently amended) Retarder unit according to claim 10, characterized by the fact that the reversing valve-(13) and the control valve-(17) are designed in such a way that they are completely sealed in the pre-determined switching position in which, by means of the bypass (66), cooling medium is being directed around the retarder in the direction of the retarder-(100).

Claim 12. (new) Drive unit according to claim 2, characterized by the fact that a pressure relief line is connected to a pressure shutoff valve at the cooling circuit and/or the retarder, whereby the pressure shutoff valve is positioned in the pressure relief line in such a controlled way that it is opened during the changeover of the retarder from braking mode to non-braking mode.

Claim 13. (new) Drive unit according to claim 3, characterized by the fact that a pressure relief line is connected to a pressure shutoff valve at the cooling circuit and/or the retarder, whereby the pressure shutoff valve is positioned in the pressure relief line in such a controlled way that it is opened during the changeover of the retarder from braking mode to non-braking mode.

Claim 14. (new) Drive unit according to claim 2, characterized by the fact that, during braking mode, the pressure relief line is connected to the front of the retarder with one end at a place of low pressure in flow direction and with the other end at a place of high pressure to the retarder or behind the retarder, whereby the pressure at the place of low pressure, in particular, amounts to a maximum of 2 bar and the pressure at the place of high pressure amounts, in particular, to between 11 and 30 bar.

Claim 15. (new) Drive unit according to claim 3, characterized by the fact that, during braking mode, the pressure relief line is connected to the front of the retarder with one end at a place of low pressure in flow direction and with the other end at a place of high pressure to the retarder or behind the retarder, whereby the pressure at the place of low pressure, in particular, amounts to a maximum of 2 bar and the pressure at the place of high pressure amounts, in particular, to between 11 and 30 bar.

Claim 16. (new) Drive unit according to claim 4, characterized by the fact that, during braking mode, the pressure relief line is connected to the front of the retarder with one end at a place of low pressure in flow direction and with the other end at a place of high pressure to the retarder or behind the retarder, whereby the pressure at the place of low pressure, in particular, amounts to a maximum of 2 bar and the pressure at the place of high pressure amounts, in particular, to between 11 and 30 bar.

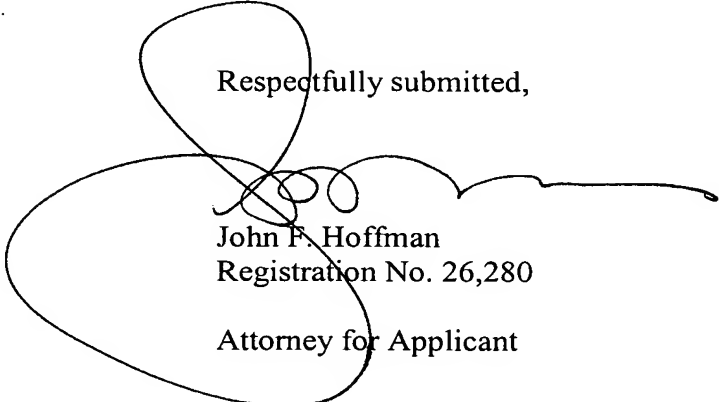
Claim 17. (new) Drive unit according to claim 2, characterized by the fact that the drive unit has a motor and a gearbox, and that the retarder is a secondary retarder which is located in force flow direction behind the gearbox.

Claim 18. (new) Drive unit according to claim 3, characterized by the fact that the drive unit has a motor and a gearbox, and that the retarder is a secondary retarder which is located in force flow direction behind the gearbox.

Claim 19. (new) Drive unit according to claim 4, characterized by the fact that the drive unit has a motor and a gearbox, and that the retarder is a secondary retarder which is located in force flow direction behind the gearbox.

Claim 20. (new) Drive unit according to claim 5, characterized by the fact that the drive unit has a motor and a gearbox, and that the retarder is a secondary retarder which is located in force flow direction behind the gearbox.

Respectfully submitted,



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